June 24, 2003

TO: Internal File

FROM: Priscilla Burton, Environmental Scientist III/Soils and Team Lead

RE: Stockpile Area, Wildcat Loadout, Andalex Resources, Inc., C/007/033-AM03A, Task ID #1381

SUMMARY

The site of the Wildcat Loadout is found on the "Standardville" U.S. Geological Survey 7.5 minute quadrangle map in Township 13 South, Range 9 East, Section 33 (see also Figure 1, Chapter I). The site is located three miles west of highway 6 on the Consumer's Road on federal land managed by the United States Department of Interior Bureau of Land Management. Andalex has held the permit for the Wildcat Loadout since 1985. The permit area covers 91 acres of which 63.7 acres are within the disturbed area boundary (Exhibit A of the Permit). Of these disturbed acres, 36.1 acres are pre-SMCRA (Chap III, Section G, Part 3, pg 46 and Appendix B). The facility is designed to handle the loading and crushing of 1.5 million tons per year (Chap I, Part B, page 3).

Plans were received May 12, 2003 to create an additional stockpile on the southeast side of the haul road PR-5 between sediment ponds A and B, adding 0.92 acres of disturbance within the previously established disturbed area boundary. The stockpile will be fed by a grasshopper conveyor and ultimately have the height of 40 feet (Field Visit February 28, 2003). Plate 1 Wildcat Loadout Surface Facilities As Constructed shows the location of Sediment Pond A and Topsoil Storage Pile A. The application was reviewed under the Utah Rules for Coal Processing Plants Not Located Within the Permit Area of a Mine, R645-**302-260**.

Currently it is estimated that 419,823 cubic ft of topsoil (15,549 CY) is stored in four stockpiles A, B, E & F (MRP, pg 80). At a replacement depth of six inches, the 56-acre site has a deficit of 30,000 cu yds of soil, (page 51 of the MRP). The Carbon County soil survey classifies the undisturbed soils in the Wildcat area as Map Unit 52, Hernandez family 3-8% slopes. Harvesting these deep soils could alleviate the deficit. The plan proposes stripping topsoil to a depth of 24 inches within the 0.9 acre additional disturbed area. This would provide 3,000 cu yds of topsoil that would be placed on Topsoil Stockpile A, immediately adjacent to the expansion area.

Coal fines have accumulated on the surface of the expansion area to a (maximum) depth of seven inches. Coal fines will be removed from the topsoil prior to salvage and placed in the refuse pile located on the western perimeter of the site, immediately north of topsoil storage areas E and B.

The application should verify the current acreage devoted to stockpiles at the site and include aggressive measures to avoid deposition of coal fines outside the disturbed area.

TECHNICAL ANAYLSIS:

GENERAL CONTENTS

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Appendix B contains a list of six violations that were incurred by Andalex in the years preceeding the original MRP application, 1984 – 1987. Chapter II, Section B, item 3 (page 9, incorporated effective April 26, 1999) indicates that there were no additional violations incurred prior to the April 26, 1999 date. Rule R645-301-113.300 requires that a list of all violations incurred during the three years preceeding the date of application is submitted with the application. Alternatively, the Permittee may restate in this application that Appendix B contains a listing of all violations received within the last three years prior to the date of this application by Andalex Resources and affiliated companies.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-113.300, The application must include a listing of all violations received within the last three years prior to the date of this application by Andalex Resources and affiliated companies.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

The proposed amendment to expand the stockpile storage area is within the currently approved disturbed area for the Wildcat site on federal land managed by the Bureau of Land Management.

The surface lease agreement with the Utah Railway has been in place since 1981 (Appendix B). The U.S. Department of the Interior, Bureau of Land Management Right of Way Agreement has been in effect since 1982 (Chapter II, Section C and Appendix B). The Agreement with Beaver Creek Coal Co. has been in effect since 1988 (Appendix B).

Findings:

The minimum Right of Entry requirements of the Regulations have been established.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The mining permit for the Wildcat Loadout Facility was issued to Andalex Resources Inc. in May 1999 for a period of five years. The current permit expires May 5, 2004.

Effective May 1994, Exhibit A of the permit described a surface disturbance of 63.7 acres.

Findings:

Andalex Resources Inc. holds a valid State of Utah mining permit that expires May 5, 2004.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The application indicates on page 63 of Section 5.2 that "This area has been lightly covered by wind-carried coal fines over the nine year history of Wildcat." This statement is outdated due to the time frame given for the operation. The statement errors in that the covering of coal fines accumulating to the east of the main stockpile has been measured to be approximately three inches deep and does not qualify as "lightly covered" any longer.

Air Quality information is presented in Volume I, Part IV, Section V of the MRP. Item 5 indicates that the loadout is not required to have a PSD Air Quality Permit. This statement is outdated and should be corrected.

Other areas of the application and MRP needing correction and clarification are itemized in the deficiencies below.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-121.100, (1) Please revise or remove the statement on page 62 of Section 5.2 concerning the fugitive dust accumulations east of the main stockpile and "the nine year history of Wildcat." (2) Update Table of Contents with new Appendices. (3) Update Chapter IV, Part A, Sections 1 - 5 with current information. (4) Update Chapter IV, Part F, Section 3 with current information on acreage with topsoil removed. (5) Revised Plate 1 must clearly show the location of the topsoil substitute revegetation test plot areas as described in Chapter IV, Part F, Section 3, page 81. (6) Update the information presented in Volume I, Part IV, Section V, Item 5 of the MRP. (7) Update information in the MRP regarding the current capacity of the facility in tons per year (Chap I, Part B, page 3).

R645-302-263 and R645-301-121.200, (1) Instructions on the C1 C2 form indicate that page 63 should be replaced, however, the information on the new page 63 does not replace the information on the existing page 63, please renumber the new pages accordingly. (2) Show on a map the areas of contemporaneous reclamation described in the permit application in Chap IV, Part F, Section 3, page 80 and 82 (3) Please clarify the apparent contradiction stated in Chapter IV, Part F, Section 3, page 80-A and 80-B concerning the treatments applied to the ground surface after transferring topsoil piles to a new location in 1994. i.e. Was there any interim reclamation of the ground surface?

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

Consultants are listed in Volume I, Chapter VI, Section A of the MRP. The soil survey was conducted by Mr. James Nyenhuis, an ARCPACS certified soil scientist.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-131, Update the list of consultants provided in Volume I, Chapter VI, Section A of the MRP.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The permit area covers 91 acres of which 63.7 acres are within the disturbed area boundary (Exhibit A of the Permit). Of these disturbed acres, 36.1 acres are pre-SMCRA and 12.5 acres are under lease with the BLM (Chap I, Part B, page 1 and Chap III, Section G, Part 3, pg 46 and Appendix B). The proposed amendment to expand the West Ridge "A2,B" coal stockpile on the southeast side of the haul road PR-5 between sediment ponds A and B, adds 0.92 acres of disturbance that is already within the currently approved disturbed area boundary for the Wildcat site. The site is on federal land managed by the Bureau of Land Management.

Findings:

The information provided meets the requirements of the Permit Area Regulations.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

Climatological information is provided in Volume 1, Chapter III, Section F of the MRP.

Temperatures at the site are 3 – 5 degrees cooler than in Price, Utah which is 1,500 ft lower in elevation than the mine site. The frost-free period lasts about five months from early May to early October (Chapter III, Sec F., Part 3.2, page 36). Rainfall patterns at the site (Table III-1 page 31 of the MRP) indicate that the best time for seeding may be during the late summer months rather than late fall. Some success was noted in seeding Topsoil Pile A during the month of June 2002.

The timing of topsoil repreading and seeding in the reclamation schedule described in Chapter IV, Part F, Section 1.1, page 73, may be revised based on this climatological information and the success of alternative seeding methods on the topsoil piles.

Findings:

The information provided meets the minimum requirements for Climatological Information.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Soil Resources are described in Chapter III, Part I of the MRP. Appendix D contains the Soil Survey information for the site as well as the topsoil mass balance and soil chemistry information. Plate 13 summarizes topsoil storage.

The Carbon County soil survey classifies the undisturbed soils in the Wildcat area as Map Unit 52, Hernandez family 3-8% slopes. These deep soils could supply a lot more than six or twelve inches of topsoil.

The Wildcat soil was described twenty years ago by Earl Jensen, retired soil scientist with the NRCS. (The location for his pit is generally given as the intersection of the Gordon Creek road and Utah Railroad.) He classified the soil as fine loamy mixed mesic Ustollic Calciorthids with a map unit name of Abra loam. He indicated that there was 60 inches of

available topsoil. He also indicated that there was a layer of calcium carbonate accumulation from 9 – 12 inches. And that adjacent soils did not have this layer of accumulation. The Abra loam is an official series name on the NRCS soil survey web site http://wwwsoils.usda.gov go into classification and official series descriptions, view by series names. The NRCS changed the classification of this series to fine loamy, superactive, mesic, Ustic Haplocalcid. The "superactive" designation pertains to the ratio of the electrical conductivity and the percent clay. There can be a calcic horizon in the soil.

The 1988 SCS soil survey for Carbon County maps the soils of the site as the Hernandez Series (Map Unit 55) and classifies the soils as fine-loamy, mixed, superactive, mesic Ustic Haplocalcid (similar to the Abra loam, described above). This is a deep soil that is capable of high production if an adequate amount of water is supplied.

The submittal provides and Addendum to Appendix D containing soil survey information for the acre expansion area. The survey was conducted by Mt. Nebo Scientific under the direction of Mr. James Nyenhuis, an ARCPACS certified soil scientist. Mr. Nyenhuis was on site March 13, 2003 to survey and map the soils eastward to the County Road.
The survey confirms the Hernandez soil identification. Mr. Nyenhuis recommends salvage of the surface twenty four inches as the best available material based on texture and nutrient content, but describes the entire profile (to 54 inches) as suitable growth material.

Substitute topsoil has also been evaluated in four fill slopes of the site through the use of test plots described in Appendix N. These plots were installed in 1989 and last evaluated in 1993, with limited success.

The site currently has a deficit of 30,000 cu yds of topsoil for a minimal coverage of six inches. There is no provision for the four foot of cover required for the quantity of coal preparation waste on site. This expansion could be an effective way to eliminate the deficit in topsoil resources.

Findings:

The information provided meets the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine.

OPERATION PLAN

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244.

Analysis:

Air Quality information is presented in Volume I, Part IV, Section V of the MRP. Item 1 indicates that the permit area is in a Class II air quality area. The Air Quality Approval Order (AO) dated January 5, 2000 was included with this application. The AO allows a total throughput of 5,000,000 tons per rolling twelve month period.

Among other things, the AO requires water or chemical treatments on unpaved roads to be kept moist at all times unless the weather is freezing. The AO places a 0.21 mile limit on the length of the haul road and a speed of 5 mph.

The AO requires covered conveyors. The AO requires that water sprays or chemical dust sprays are used on all unpaved operational areas that are used by mobile equipment, as well as truck unloading stations and all screens. The moisture content of the material passing through a #40 sieve is to be maintained at 4% by weight.

The AO requires that the maximum area dedicated to storage piles is 16.5 acres. Using Plate 1, the Division estimates that there is currently approximately 22 acres of coal stockpiles and coal preparation waste storage on site. Storage piles will be watered as dry conditions warrant, and chemical stabilization of the storage pile.

Visible emissions from all points shall not exceed 20% opacity.

The MRP indicates in Volume I, Part IV, Section V, Item 5 that the project does not require a PSD Air Quality Permit because of the definition of major source.

The Division's imperative is to promote coal mining in an environmental responsible manner. Therefore, the Division requests that the plan includes measures for reducing fugitive coal fine particles outside the permit area.

The measures currently employed at the Wildcat Loadout have not limited the impact of coal fine fallout to the disturbed area. The application should

1. reevaluate the remedies applied to control fugitive dust,
2. revise the remedies to include more aggressive measures to avoid deposition of coal fines outside the existing permit area and
3. ensure that the requirements of the Air Quality Approval Order dated January 2000 are enforced.

Plans for a more substantial expansion referred to in the cover letter accompanying this amendment must include implementation of fugitive dust control strategies such as construction of permanent wind breaks upwind and downwind from coal stockpiles and/or containment of stockpiles.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and 645-301-422, (1) The application must account for the existing acreage of storage piles on site and if the acreage is in exceedence of the Item 15 of the Air Quality Approval Order, the application must include correspondence with the Executive Secretary of the Utah Air Quality Board concerning the existing and proposed acreage of the site dedicated to storage piles.

R645-302-264.700, The application should include aggressive measures to avoid wind and water deposition of coal fines outside the disturbed area.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Removal and Storage

Topsoil handling is described in Chapter IV, Part F., Section 3. This application revises Chapter IV, Part A, Section 5.2 (page 62) to indicate that the area of expansion will be scraped to a depth of 2-6 inches from the site to remove the coal fines. The topsoil beneath the coal fines will be salvaged to a depth of 24 inches. The twenty-four inch salvage depth is based upon the consultant's recommendation that although the entire profile is suitable material for salvage, the top twenty-four inches has the better texture (loam) and higher nitrogen content than the subsoil

The Division agrees with the salvage of the top twenty-four inches of topsoil, but will require the remaining thirty inches of subsoil is salvaged and stockpiled separately for use coal mine waste during reclamation. In previous expansions, refuse was used as fill to create a foundation for the stockpile. In effect, this practice is the first step in burial of the coal mine waste. Salvage of subsoil from the site before placement of the waste is logical because it minimizes handling of the waste and places the subsoil in immediate reach.

The acid/toxic forming characteristics of the coal processing waste (refuse) are described in Chapter IV, Part O, Section 1.1 Coal Processing Waste and Chapter III, Part C, Section 1.2 – 5 and Appendix D. This information does not apply to the coal fines or fugitive dust accumulating on the soils. Such coal fines may be from any one of the six existing stockpiles on site that contain coal from Genwal and West Ridge Mines.

The submittal includes an Addendum to Appendix D which is the soil survey conducted under the direction of Mr. James Nyenhuis for Mt. Nebo Scientific in March 2003.

Currently it is estimated that 419,823 cubic ft of topsoil (15,549 CY) is stored in five stockpiles A through E (MRP, pg 80). Only four stockpiles were noted on Plates 1 & 2. The stockpiles shown on the plates are A, B, E, &, F. Chapter IV, Part F, Section 3, page 80 describes transfer of topsoil piles B, C, and D to the west side of Wildcat for protection against wind blown coal fines (in 1994). The MRP indicates that transferred topsoil was seeded with the species noted on page 80A and that areas where the topsoil was removed was drill seeded with the mixture specified on page 88.

The submittal should include a revision of the text and plates where topsoil stockpiles are described in Chapter III, including cross-sections of the topsoil piles as constructed (Plate 13) and Chapter IV page 80.

Topsoil B was recently reseeded in December 2002. Topsoil A was recently reseeded in June 2002 (see inspection reports). Topsoil B used to have test plots on its surface. The test plots were installed in 1994 as described in Chapter III, Part I, Section 1, page 52 and Chapter IV, Part F, Section 5.3, page 86 of the MRP. Mr. Glasson provided the Division with a copy of the 1997 evaluation of these test plots (incoming folder 3/11/03).

The existing stockpiles are located on the west, south and north perimeters of the disturbed area. The prevailing winds are from west to east. Topsoil piles E and B are upwind of the site. Topsoil Pile A is immediately adjacent to the proposed expansion area and would be affected by fugitive dust from the coal stockpile located on the northwest of the pile.

To avoid contamination of Topsoil Pile A, the Division recommends that this topsoil pile be relocated to the vicinity of Topsoil Pile E. Reclamation techniques used on the reconstructed topsoil pile should include gouging, mulching, seeding, and netting. Rainfall patterns at the site (Table III-1 page 31 of the MRP) indicate that the best time for seeding may be during the late summer months rather than late fall. Some success was noted in seeding Topsoil Pile A during the month of June 2002.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-231.400, The submittal should include a revision of the text and plates where topsoil stockpiles are described, including cross-sections of the topsoil piles as constructed.

R645-302-263 and R645-301-232.500, The application should indicate that subsoil from twenty four to fifty four inches below the surface will be separately salvaged and stockpiled for use use as cover over coal mine waste during final reclamation.

R645-302-263 and R645-301-234.220, Topsoil Pile A should be relocated to the vicinity of Topsoil Pile E to avoid contamination by fugitive dust from the coal stockpiles located to the northwest.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Coal Mine Waste

The coal processing waste (refuse) was sampled in 1994 as described in Chapter IV, Part O, Section 1.1 Coal Processing Waste and Chapter III, Part C, Section 1.2 – 5. However, refuse analyses could not be found in Appendix D. Note: This information does not apply to the coal fines or fugitive dust accumulating on the soils.

Refuse Piles

Plate 1 indicates a storage location for coal preparation waste material. The quantity of material stored in this location was not found in the MRP. Refuse material has been used as fill to create a foundation for the areas of previous expansion as noted on page 147-G-1A (Chapter IV, Part O, Section 1.2). The quantity of refuse used as fill was not found in the MRP.

What material will be used to create the fill necessary for the current expansion?

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-264.300 and R645-301-731.311, (1) Include in the application the quantity of coal preparation waste stored on site in the coal preparation storage area and in fills. (2) Provide the 1994 refuse analyses referenced on page 147-G-1 of Section 1.2, Part O of Chapter IV.

R645-302-264.300, Indicate in the application what material will be used to create the fill necessary for the foundation of the expansion area.

RECOMMENDATIONS:

The application should not be approved until the deficiencies identified in this technical memo are addressed.

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